

CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society
Of America

Vol. XIV

APRIL, 1942

No. 4

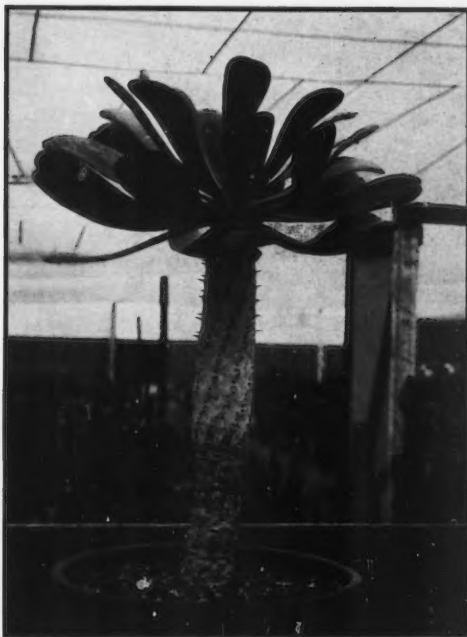


FIG. 28. *Euphorbia venenifera* in the collection of
R. W. Poindexter. Photo by Haselton.



CACTUS AND SUCCULENT JOURNAL

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WHO'S WHO

Whose picture would you like to see in the JOURNAL? Over the last ten years we have introduced you to about fifty Society Members who are making cactus history. Mrs. Vera Higgins in England says, "I must say that, personally, I do like to know what my distant friends look like. There is little chance of ever meeting each other but one can get a very long way in friendship by letter where there are common interests, as many of us have done through your JOURNAL."

And Mr. H. Crook of Australia says, "The printing occasionally of the photos of members of the Society makes me feel that I know them personally."

"ARIZONA HIGHWAYS"

The March issue of this wonderful magazine is filled with full page pictures of cactus flowers. "The God-dess of the Night" (*Peniocereus Greggii*) is shown in all stages of its expanding flowers and the write-up by Gusse Smith is entertaining and instructive. The other desert pictures, as well as the stories, are priceless. The February issue pictured a sunshine map of the United States. After looking at the map, if you are dissatisfied with your sunshine, it shows you right where to go—not to Southern California, because there are three other sunnier areas (if that's possible!).

The construction work in the Organ Pipe Cactus National Monument is reported as follows:

Fisher Contracting Company, Phoenix, Arizona, has contract in the amount of \$310,401.28 for grading, installing drainage structures, placing base course, bituminous treatment, and incidental work on Organ Pipe Cactus National Monument Route 1, Pima County, Arizona. Length of the project is 22.7 miles, extending from the Mexico-United States Border to the north boundary of the monument. Work will be started about February 20, 1942. R. M. Rutledge is resident engineer.

Send \$1.00 for a year's subscription to Arizona Highways, Phoenix, Arizona.

JOURNAL OF THE
ROYAL HORTICULTURAL SOCIETY

Vol. LXVII, Part 3, of March, 1942, has many items of interest: Reports on English flower shows, reviews of new books, announcement of Vol. II of the "Horticultural Colour Chart," etc., which means more than newspaper head lines. In the same issue Vera Higgins reviewed "The Succulent Euphorbiae." (More than 800 volumes have been sent to England and So. Africa without a single loss.

S. E. H.

1942 OFFICERS OF THE CACTUS AND
SUCCULENT SOCIETY OF OKLAHOMA

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Program subjects for the year: Distribution of Stapelias, Location and Description of Native Fields, Round Table Discussion, Technicolor Motion Pictures, Interesting State Gardens, Cactus Collecting—Then What? My Favorite Euphorbias, Distinguishing Characteristics of Cacti and other succulents, Important Authorities on Succulents, Epiphyllums, Cactus and Succulent Publications, Use of Agaves in Oklahoma Gardens, Echinopsis, Haworthias, Pests and Their Effective Control, Mesembryanthema, Copiapoa, Round Table Discussion, Succulent Window Gardens, Scrap Book Review, Astrophytum, Christmas Party, Native Seedlings, Seedlings vs. Collected Plants.

EDITOR'S QUERY

We have for publication an article "Cactus Seed Germination" in which is mentioned an attic covered with "Russian Steel." Will the author please contact the JOURNAL and report on the condition of the plants after winter storage?

S. E. H.

CEREUSLY SPEAKING

The feature "Cereusly Speaking" should have the unqualified approval of every amateur member. I know it most definitely has mine. To the author's query as to how to make his Rat Tail Cactus (*Chamaecereus Silvestrii*) bloom I would like to say that I overcame this difficulty by a combination of grafting and plunging the pot in full sun.

The results, one year after grafting, were 40 or more flowers—and an exhausted stock. (See CACTUS JOURNAL: Vol. IX, No. 7, pg. 105 and Vol. IX, No. 12, pg. 199.)

G. GRAHAM DIMOCK, Canada.

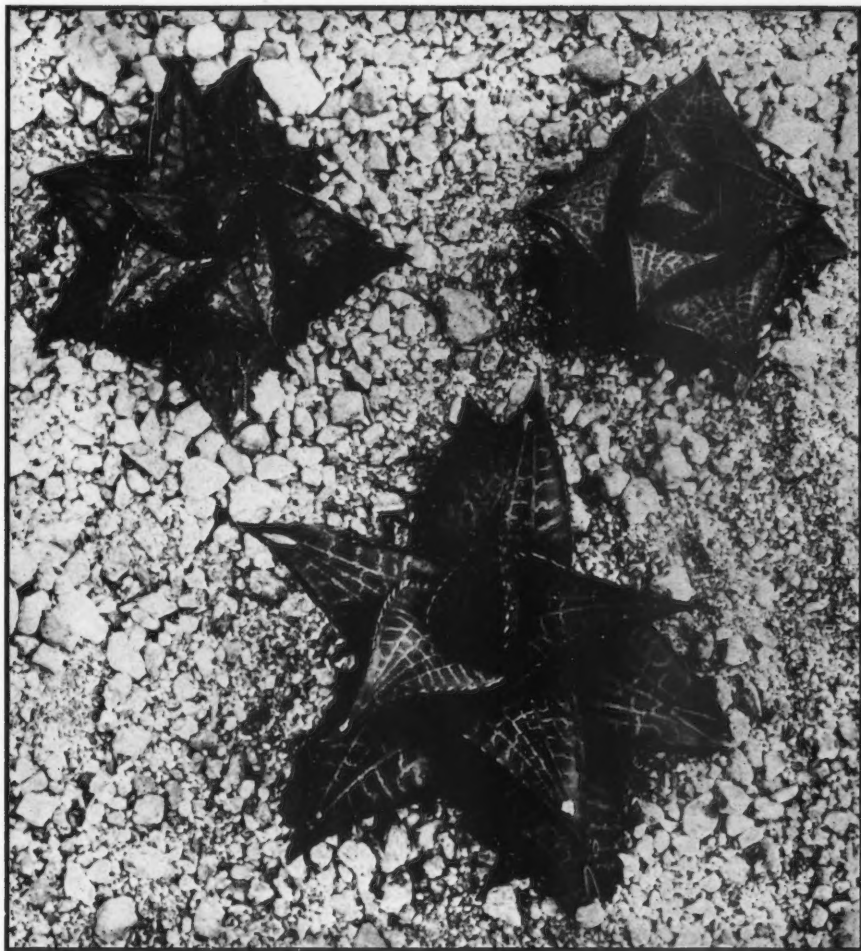


FIG. 29. *Haworthia tessellata* Haw. (center); *var. inflexa* Bak. (upper left); *var. parva* (Haw.) Bak. (upper right). All nat. size.

Notes on Haworthias

By J. R. BROWN

Haworthia tessellata Haw. *var. inflexa* Bak. in Journ. Linn. Soc. XVIII (1880) 211; Berger in Pflanzenr. IV. 38. (1908) 97; Poelln. in Repert. Sp. Nov. XLIV (1938) 202. *Haworthia pseudotessellata* Poelln. in Repert. Sp. Nov. XXVII (1929) 133.

Plant 5-7.5 cm. tall, and about 5 cm. in diam. Leaves ovate-deltoid, dark purplish-green, face concave and with 5 lengthwise obscurely anastomosing lines, margins prominently inflexed and with irregularly disposed white teeth.

Locality: Type locality unknown. Recorded from Cruidefontein Rail, Hanover, Prieska, Beaufort West, Bethlehem in O. F. S.

The illustration shows a plant scarcely 5 cm. tall, the leaves of which were 3 cm. long and 22 mm. wide towards the base. The margins are very inflexed at all seasons, the color is dull and dark compared with other well known forms of *Haw. tessellata*, the lines on the leaf faces are more or less obscure, especially in the dormant season, hence the name *Haw. pseudotessellata*.

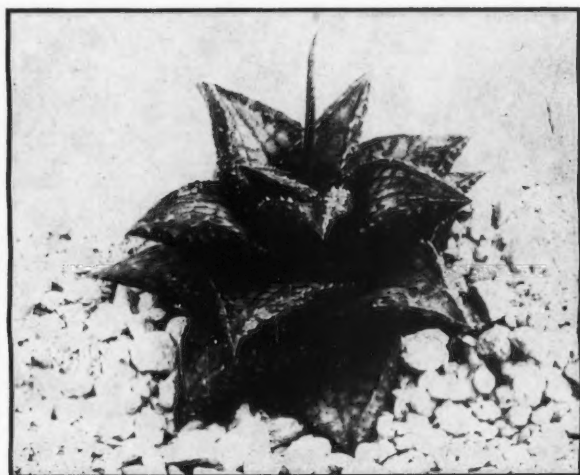


FIG. 30. *Haworthia tessellata* Haw. var. *inflexa* Bak. nat. size.

Poelln. The lengthwise lines on the leaf faces of mature leaves are usually about 5 but may be up to 7.

One often sees plants, especially of *Haw. tessellata* var. *parva*, under the name, var. *inflexa*. This is no doubt due to the fact that in a very

dry, or in a very dormant condition, the edges of the leaves of *Haw. tessellata* and its forms are rolled inwards.

The relative appearance of *Haw. tessellata* var. *parva*, and var. *inflexa*, from above, is also shown by a photo of the 3 plants.

PRESIDENT'S MESSAGE

At the Convention last July, it was decided that Deputies of the Regional Vice-Presidents would help lighten the work of the latter and create a more efficient system. The duties of the Regional Vice-Presidents, as you know, are to spread the interest in Xerophytic plants, answer questions of interested parties within their respective districts, strive to obtain new members for our Society, and, when practical, create new Affiliated Societies in the unorganized territories.

Only having ten Regional Vice-Presidents to cover the whole of the United States makes large territories for each. Because of the present rubber curtailment program, these territories have assumed even larger proportions, and make the appointment of Deputies even more essential.

The duties of these Deputies are identical to those of the Regional Vice-Presidents; they will make monthly reports to the R. V. P. in whose district they reside; the R. V. P.'s will in turn make collective reports to the President, or, as in regard to new Affiliates, to the Corresponding Secretary, Mr. Thor Bock, 8148 Mannix Drive, Hollywood, California.

Appointment of Deputies is now being made and the complete list will be published in next month's JOURNAL. Remember that these Deputies are being appointed for your convenience; write to them for any information you may desire that pertains to our interesting hobby.

* * *

Already a great many interesting letters have been received from those who, in answer to last month's request, have written to state their willingness and desire to have visitors to their gardens. I regret that I cannot answer all of these letters personally. They are none-the-less appreciated and I take this opportunity to thank you all. From them, a very useful catalogue is

being compiled for the benefit of those traveling in the various districts. Some members have designated particular days in the week that are most convenient for them to have visitors, others wish appointments made. It is therefore advisable, when contemplating a garden tour beyond the bounds of your immediate vicinity, to contact this office for the latest information and listings.

ERVIN STRONG
315½ W. Erna Ave.
La Habra, California.

From Pasadena Post, March 30, 1942

A lifting of censorship permits the telling of the story in which the "Black Dragon" spies and their Axis partners snooped for invasion sites in the Netherlands East Indies.

Shortly before the war, very polite Japanese scientists on a botanical research expedition arrived at New Guinea, where American aviators now are fighting. The professors spent great sums delving in the jungles and around the coast. The first inkling that something was cockeyed came when the Dutch authorities discovered that the floral experts were traveling under false names and actually were high ranking naval officers.

Hirohita's Hawkshaws sneaked around other spots in the archipelago. On lonely atolls they openly browbeat the natives and warned that terrible things would happen if they resisted Japan. In Java the tourists became polished scholars again and quietly told a local prince that the Mikado would make him "King of Java" as soon as the "weak Dutch" were driven out. The hand-picked future puppet squealed to the officials—but by that time the Nips had skipped.

EDITOR'S NOTE: This explains why we published the Java article on page 22 of the February JOURNAL. Read it again.

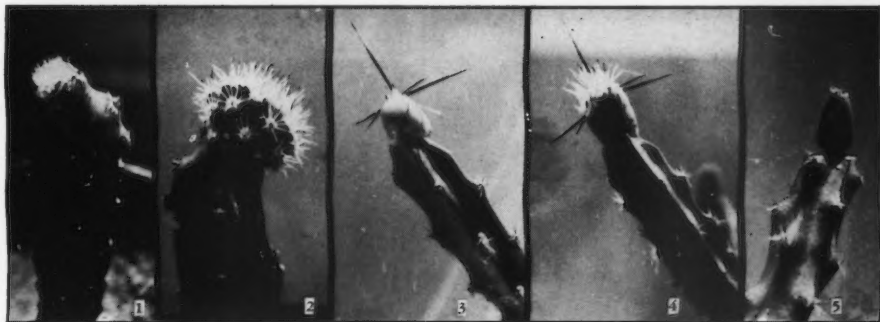


FIG. 31. Grafting tubercles and small bits of material.

GRAFTING

By OSCAR E. SWAN, JR., Kansas

Here are some photographs of cactus grafts made in an out of the ordinary manner. I don't recall having seen either illustrations or text describing similar grafts, although perhaps they are of the same class as the upside down grafts described in "Cacti for the Amateur."

The success of an upside down graft depends upon the scion being able to produce offsets from dormant buds in the areoles, since the scion has no active growing center. In my own collection, I have had only one opportunity to make an upside down graft. I seldom graft a healthy plant, and then only when no other method of saving a plant presents itself. Since decay usually starts at the base of the plant, about all I have left as scion material, when I finally resort to grafting, is the healthy young tissue near the growing tip of the plant—often little enough of that. It is perfect scion material when stock of the right diameter is available.

In addition to this growing tip, there is also considerable usable plant material which is usually thrown away. This material has decay or disease in the center, while the outer tissue may be quite healthy. These photographs illustrate the following case history, showing how this material can be utilized.

1. An apparently thriving plant of *Echinocereus bonkerae* showed signs of bores. The growing tip was successfully grafted on *Trichocereus* stock. From the body of the plant, which was almost completely hollowed out, a section of rib containing three areoles, with no sign of disease or decay, was salvaged. A *Hylocereus* stock was sliced near the top with a sloping cut approximately the same in cross section as the cut surface of the rib scion. The scion, with spines trimmed for easy handling, was then placed on the stock and pressed into place. No other means of holding the scion in place than the natural adhesion of the two freshly cut surfaces was used. In Fig. 1, growth is shown just starting from the

topmost areole in this section of rib. In Fig. 2, taken 3 weeks later, growth is well under way, and fast overtaking the scion grafted on *Trichocereus* stock.

2. Here, a plant of *Echinocereus fendleri* suddenly collapsed with old age and rot. In this case even the growing center was gone. One piece of rib, almost a tubercle in shape, with one areole, was all that was saved. This was placed on the tip of a vigorous *Selenicereus macdonaldiae* stock, in much the same manner as recommended for young seedlings except that here again the cut in the stock was sloped to approximate the cut surface of the bit of scion. Fig. 3 shows this graft before growth had started. Fig. 4 shows the new growth just bursting from the tubercle.

In both these instances success depended on new growth being forced from the dormant areoles. In the case of the *E. fendleri*, graft success depended on a single areole, all that could be saved from the plant, otherwise the plant would have been lost. When these scions reach the proper size they can be removed for rooting, and the wound made in severing them from the stock, in both cases, will be much smaller than with terminal grafts of either variety. In the case of scions with more than one areole, the still dormant areoles can be left on the stock to develop more new growth.

Of course I always use a good healthy growing tip, but most of my grafting is now done with areoles, tubercles, sections of rib, and other odd bits of plant material, while the growing tips are used as cuttings. On a valuable plant, a few such grafts are a cheap form of insurance against failure or loss, especially when attempting to root the top as a cutting, as cuttings cannot always be relied on to root.

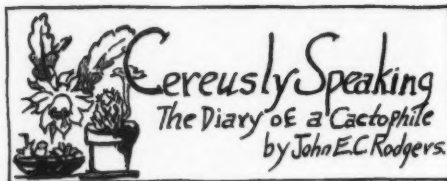
Often, favorite specimens will not offset. Using this method, the top can be cut off and re-rooted or grafted, and the remainder of the plant

can be used much as a nurseryman uses a bud stick in propagating fruit trees, each areole being theoretically capable of producing a new plant. In this way, the variety can be reproduced vegetatively in considerable numbers without waiting for offsets, the limiting factors would be the amount of material available for stocks, and the number of suitable areoles in the plant to be propagated. Or, suppose one wants to save the specimen, and still produce a new plant from it vegetatively. With a little care, and a sharp knife, a scion consisting of a tubercle or a small section of rib can be removed from the parent plant with no damage to the health of the specimen, and little, if any, to the beauty. Then, when the plant does die, as they all must eventually, a replacement is ready and waiting. Fig. 5 shows a *Coryphantha* tubercle thus removed and grafted. This tubercle is not missed by the parent plant, its loss can hardly be detected now.

There is nothing complicated or difficult about this kind of grafting, and nothing really new, although I think it is a little different from usual methods. It rather simplifies the procedure, because of the small scion used, the natural adhesion of the freshly cut surfaces is usually sufficient to hold the scion in place until a union is made. This eliminates all the rubber bands, string, spines, toothpicks, etc., ordinarily recommended. Since the scion is small, care must be taken to so trim it that *all or nearly all of its cut surface is in contact with the cut surface of the stock*, otherwise the scion may dry out and die before the union is complete. If some of the cut surface of the stock is exposed, little or no damage is done. Vigorous, rapidly growing stock, in good condition, must be used. I have used *Selenicereus*, *Hylocereus*, and *Eriocereus* stocks very successfully. *Nyctocereus* has not worked so well, the adhesion between scion and stock being poor. *Cereus* stock should work well I suppose, but is rather large for such tiny scions.

It is important at all times that any new growth on the stock be rubbed off, otherwise, even though a union be made, no new growth will be forced from the dormant areoles. Growth is usually slow in starting, often a month or more, depending on the vigor of the stock, and general growing conditions, but once growth has started from the scion it is so rapid that you can almost watch the scion grow, as though the dammed up energy of the stock was literally bursting through the epidermis of the scion.

WARNING NOTE: This type of grafting requires reasonable warmth, protection from glaring sun, and very sharp sterile blades or knives. Most amateurs try to graft dormant material in the open with disastrous results. Don't graft hastily or without proper stocks and materials. Experiment on common plants.



PART IV April in Ohio

April Fool's Day, and I will be a fool the whole year through unless I get at the outside cleanout for the stack on that little hard coal burner I depend on for heat in the cactus house. Fly-ash is my trouble. It clogs up the stack. No draft. No heat. Sulphur fumes! And all the pretty leaves of *Pereskia grandifolia*, *Pelargonium echinatum*, *Sedum lineare*, and *Apтения cordifolia* just curl up. It is queer but all the affected plants were in sandy, well-drained soil. *Pereskias* which were in clay soil, came through untouched. Don't get me wrong. I am not planning to condition my plants to sulphur fumes. I AM going to have an accessible cleanout.

I am reverting to my old method of watering my plants one by one. It helps to prevent loss. I have one of those little watering cans that is supposed to be used in a window garden. The water pours slowly enough for me to check the plant thoroughly as to its condition. If it is to be repotted or pest controlled, or placed out where more folks beside myself can enjoy it—these are all matters I can decide as I water it. Too, as I give water to these plants so far from their native habitat, so dependent upon me for their existence,—schoolroom worries, world disturbances, the family budget, the dripping water faucet, all are completely pushed from my mind. They laugh at my "dinky" watering can, but to me, it is a symbol of release.

April 2. My blooming record is picking up. Up to now, 21 species of cacti have bloomed since January 1, and about 40 succulents have flowered. And still they say that a member of the family dies when a cactus blooms. All the Rodgers I know are still able to take nourishment.

April 3. *Epiphyllum ackermannii* has developed buds an inch long, under the bench. I put it out where it can get more light and more frequent watering. *Pelecyphora aselliformis* has new "hatchet-like" growth in the top. Is in full sun and stays quite dry. *Fouquieria splendens* (Ocotillo) has new leaves but those red blooms I read about are lacking. In 1938 I found ants working around the base of *Echinocereus knippelianus* and *Echinopsis albiflora* so I dug holes and put in some peridichlorobenzene crystals, the only thing I had at hand (Sandy uses them in her sweeper). No more ants, the provocative little carriers of the mealy bugs we cactophiles despise. I use the crystals regularly now when I see an ant or mealy bug. In 1937, this day, I received the notice of B. & R. reprints which I got some months later. Wouldn't be without them. "Too scientific" accusation overruled. I have identified seven of my newer Mammillarias so far this year. *M. kunzeana* proved its identity according to B. & R. when it bloomed today.

April 4. Horace, my pet box turtle, is out today. Slept under six inches of soil in the corner of my greenhouse. Looks muddy but his eyes were bright as he ate his hamburger pellets.

April 5. Watched Terrestrial Isopod Crustaceans (pill bugs—sow bugs) root up the edge of the white scale insects on *M. Runyonii* and eat out the soft bodied

occupants. I do not encourage them but if they can clean scale off as I observed, they can stay with me, rent free. *M. phymatotheca*, *M. wildii*, and *M. praelii* bloomed today—fulfillment of a three year effort. They were two-year seedlings when I got them. If you have shelf room for Mammillarias, their growth is steady and the circle of blooms are a pleasing reward.

Easter Sunday, and *Schlumbergera gaertneri* (Easter Cactus) still in bloom. Started on February 16. Several blooms I marked stayed open thirteen days. What is the maximum time, I wonder?

April 8. *Epiphyllum strictum* is the "Job" of my collection. Talk about trials. It was a cutting in 1935. Three stems in 1936. Two were broken off. Eight stems by 1937. Wind blew it over and it came up with two stems, and six cuttings, or breakings, I should say. By 1939 it was back to 8 and a hailstorm tore it to shreds. In 1940 there were 4 stems above the stubs. I repotted it. In 1941 I moved the whole collection and it had to be the only plant that fell from the truck. However, as the biblical Job "did increase and multiply" so does *E. strictum*. My friends have rooted cuttings which are now larger than the original plant. I pray my new greenhouse will not be its Jonah. Selah!

April 10. For one year I have been an F. C. S. S. I almost fell off a stepladder trying to see if the Selenicereii are budding. Fuzzy spots on *S. macdonaldiae*, *S. spinulosus*, and *S. brevispinus*. *Cotyledon tetetifolia* is through blooming. The red edge on the peculiarly shaped leaves never fails to arouse interest. Shetrone does not recommend this plant because it has a tendency to wither at the ends. My plant does do this at times, but when it blooms all is forgotten.

April 15. What is my trouble, I wonder? In the book "It's Nice to Know People Like You" by Harry Walker Hepner, Chap. 3, p. 17, "Steinmetz fussed with ugly, weird plants (he refers to cacti, you understand). He himself was exceedingly ugly and malformed." Can't we just like cacti, or must it be psychological?

April 16. In 1935 I wrote "Temperature dropped from 58 degrees to 23 degrees in two hours. Plants I had set outside because it has been so warm the last two weeks, certainly look sick." Live and learn. We can and do have frosts here after May 15. As my mother-in-law says, "Well, John. Your cactus house is half large enough." I'll need half a block under glass to house my fast growing Opuntias. I am often convinced I should throw them out. But not only do I guard my own, but I have on several occasions rescued pads from other growers' refuse piles. The ledge in our basement houses two-thirds of these plants during the winter. I keep pinching back the stringy growth and give them very little water until time to set them out in the spring. They do add character to out-door plantings. Good show plants. Yes, you guessed it, I keep Opuntias.

April 17. Stapelias, Huernias, and allied species are showing spring is here. *S. grandiflora* has buds set. *S. gigantea* and *S. nobilis*, too, may have buds. Look suspicious. Have four new plants listed as Stapelias: *S. buena*, *S. bicolor*, *Huernia decipiens*, and *H. boesneriana*. *S. bicolor* checks up with White and Sloane's description of the species in their "Stapelias." Haven't ascertained the identity of the other three yet. First bloom on *Epiphyllum ackermannii*. Seven more buds. Earliest it has ever bloomed. Bloomed twice last year. Spring and fall.

April 20. Kenneth Kline and Mrs. John Schueller, of Cleveland, two members of the Midwest society, have their plants out in open beds. Their collections are made up of fine large specimen plants and both

store them in the basement during the winter. They cover them at night if it looks frosty. Got several clumps of *Sedum spectabile* for a flower bed border. *Thelocactus uncinatus* bloomed today. Two years ago I found that a small *Echinocereus* I bought for *E. pectinatus* was *E. perbellus*. Must be in lots of collections as dealers sell them to 5 and 10's around this part of Ohio.

April 24. *Rebutia minuscula* in bloom again. *Stapelia grandiflora* opened. Epiphyllum Empress bloomed two years ago today, but nary a bud shows now. *Rebutia senilis* has eight "pups." Prolific, I say, but it is grafted and a *Cereus peruvianus* stock gives "oomph" to any plant. I won this plant four years ago at a society meeting for naming the most cacti correctly in a given group.

April 27. *Leimaireocereus chichipe* I got from Eugene Ziegler in 1932, is now over 14 inches high with 3 side-arms. It was 84 degrees in 1938, warmest it has been here on this date since 1915. *Cotyledon orbiculata* is getting "shrubby." Has white "bloom" with red edges which makes it nice in my eyes. *Thelocactus bicolor*, an old favorite of mine, bloomed.

April 30th Jottings from My Diary
1934. Sprayed the entire collection with tepid water. Reveled in the wet-earth smell.

1935. Mr. Aurelius, local collector, has his plants on a shelf along the south side of his house.

1936. Need to repotty glass in the newer part (the 3x5 ft. hothead sash extension I put on last year) of my lean-to. Winter damage bad. Warm, 72 degrees.

1937. *Gymnocalycium mihanovichii* growing again. *Coryphantha elephantidens* dead. Warm, 71 degrees.

1938. Checked "mastic" putty which I used when I re-putted in 1936. Still soft and undamaged. (49 degrees today.)

1939. *O. compressa*, in my rock garden, has plumped up and has begun to raise itself from the ground. Have not set any cacti out as yet. 53 degrees.

1940. Set *Echinopsis* and *Opuntia* under apple tree. Made a drawing of *Epiphyllum Vive-rouge*. 75 degrees today.

(To Be Continued)

QUESTIONS AND ANSWERS

Question: When should the seed be taken from the plant and how soon after gathering of the seed may it be planted and has the seed any value, from a growing standpoint, after it is more than one year old? All of this information is of great value to a cactus fan but if you ask a commercial grower he will always find some way to sidestep the question so that you really gain no useful information other than to plant the seed so deep, in such and such soil and keep them so warm for so many days.

Answer: No one familiar with seed germination would venture to go on record with a hard and fast rule for best germination timing. Some seeds of cacti are at their best when first ripe while others should age for a year or more after they have been collected. It is the custom with growers, I am told, to plant only a small percentage of seeds of unknown germinating speed at first and sow small percentages at frequent intervals to find by test when that particular seed is at its best. There are no figures available on the best time for planting any specific seeds and growers seem to think such information a trade secret. It would be a good thing for someone to keep additional records, similar to those on page 42 of Vol. XIII of the JOURNAL, and to include the date in which the seed was collected.

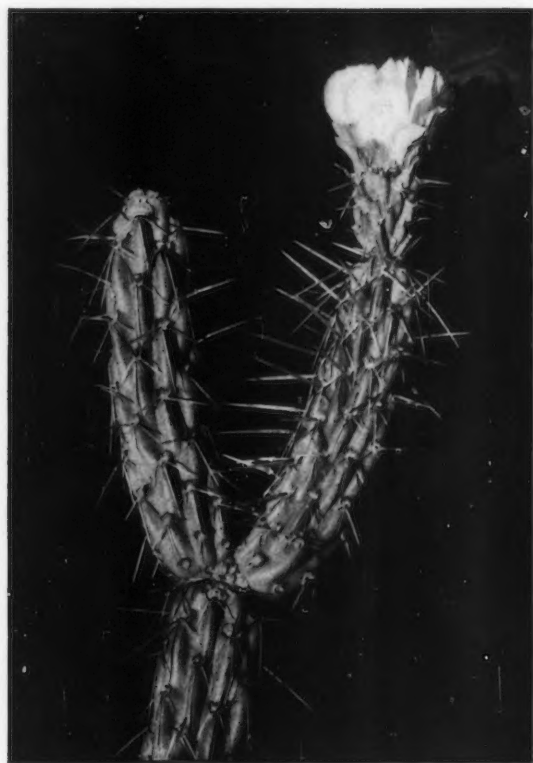


FIG. 32. *Opuntia rosarica* Lindsay, sp. nov.

A New Species of *Opuntia*

By GEORGE LINDSAY

Opuntia rosarica sp. nov.

Herba humilis, extensa, ramosa; internodia 10 ad 20 cm. longa, 2 ad 5 cm. diametro, tuberculifera; tubercula conjugata in longitudinem efficientia costas tuberculatas; areolae pilis densis brevisbusque vestitae et "glochidibus" flavis 2 ad 4 mm. longis; spinae 4 ad 7, spina media una, vaginata, porrecta, ad 3.5 cm. longa, spinae laterales vaginatae, 1 ad 2.5 cm. longae; flores flavi rubescentes, floris partes circa 24, ad 2 cm. longae; poma sicca, spinis "glochidibusque"; semina numerosa, angularia, 5 mm. diametro.

Plant low and spreading, up to one meter high, the clumps sometimes a meter in diameter, generally without a definite trunk; joints 10 to 20 cm. long, 2 to 5 cm. in diameter, blue green to olive green in color, brownish with age, tuberculate; tubercles 1 to 3 cm. long, to 1 cm. broad at base, the tubercles joined longitudinally to form more or less tuberculate ribs, the ribs 10 or 12 in number, often spiralled; areoles roughly triangular, about 5 mm. long and 4 mm. broad, containing short felt and being borne at upper

end of tubercle; glochids numerous, golden yellow, 2 to 4 mm. long, forming a semi-circular tuft about top of areole; spines 4 to 7, with several strong bristles, the central spine single, porrect, acicular, sheathed, to 3.5 cm. long, reddish brown in color; radial spines 3, sometimes more, with several strong bristles, appressed, descending, sheathed, 1 to 2.5 cm. long, acicular, horn-colored; spines and bristles being produced at lower side of areole.

Flowers produced at tips of branches, numerous, 4.5 cm. long and 3.5 cm. broad; outer perianth segments to 14, to 2 cm. long and 1.5 cm. broad, clear yellow with reddish tinged center; inner perianth segments about ten, 2.5 cm. long and 2 cm. broad, clear yellow with red tinge at apex; stamens numerous; stigma lobes 5, style about 2 cm. long.

Fruit dry, but in some cases sterile prolific fruit seems to be produced; tuberculate, tubercles

bearing spines, wool, and bristles; the spine single, sheathed, about 1 cm. long; seeds very numerous, irregularly angular, about 5 mm. in width and 3 mm. thick, very light tan in color.

Type locality: San Telmo, Lower California, Mexico.

Distribution: Imperfectly known, but common on mesas inland from El Rosario to near San Juan de Dios peak, northward along the western slope of the Sierra San Pedro Martir to a point north of San Jose and Buena Vista ranches.

Type specimen: Deposited in the Dudley Herbarium of the Natural History Museum of Stanford University, No. 278,627.

This species was discovered by Ted Hutchison in August, 1933, in the valley leading inland from Rosario. Mr. Hutchison and I were returning from a collecting-vacation trip to Catalina when he noticed the plant and took a cutting in order to identify it.

In 1934 Mr. Hutchison accompanied Mr. Howard E. Gates, veteran Lower California plant collector, on his annual cactus collecting trip, collected *Opuntia rosarica* in some quantity and it was introduced to the trade in Mr. Gates' catalogue of that year, under the name of *Grusonia rosarica*. The plant was not described.

It is understandable that this plant was first considered to be a *Grusonia*, as its tubercles are usually joined to form ribs, which character was responsible for the erection of the genus *Grusonia* in order to place the plant formerly known as *Cereus bradleanus* Coulter. The genus *Grusonia* is also characterized by the absence of sheathed spines and glochids on the areoles of the plant body. *Opuntia rosarica* possesses both, and is quite a different type of plant, so that it would probably be a mistake to classify it as a *Grusonia*.

As is noted above, the distribution for the species is imperfectly known. I have collected it on San Jorge grade, twenty miles east of Rosario, at the Cardonal in the same district, at Rancho San Juan de Dios in the center of the peninsula, and at other localities within that area. I was surprised last summer to find it far north of its then known distribution, near the village of San Telmo, on the coastal mesas between San Antonio ranch and San Telmo, and inland at Rancho San Jose and up the slope of San Pedro Martir mountain to Oak Pasture, at an elevation of 5,600 feet. The plants at the higher elevation grew much taller, with fewer branches. Without doubt, the species ranges between the northern type locality and the point of its first discovery near Rosario, which would indicate it would be found all along the western slope of the Sierra San Pedro Martir.

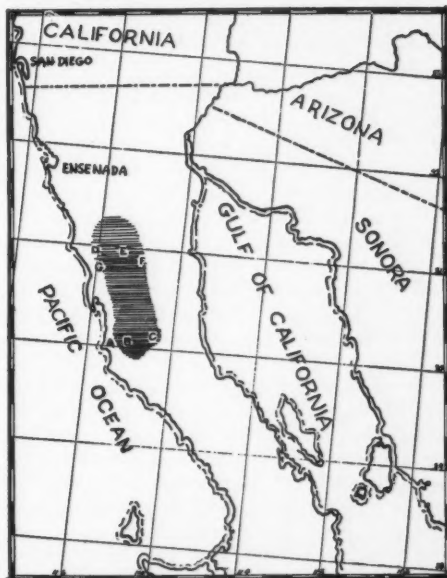
Another plant introduced to the trade by Mr. Gates under the name *Grusonia hamiltoniae*, is to be found near the seacoast at Arroyo Santo Domingo, near the Hamilton Ranch. This plant may be a true species, as the flowers and fruit are unknown, but from the material at hand it would seem likely a varietal form of *Opuntia rosarica*. The plant needs further study. In any case, the distribution of the Santo Domingo type is nearly surrounded by that of *O. rosarica*.

The type material, and photograph of type specimen in flower, was collected and made by George Lindsay at San Telmo, Lower California, August 28, 1941.

Plants growing for several years in the garden of Mrs. Neff Bakkers of San Diego have tended to produce green, fleshy, prolific fruits bearing only a few or no seeds. I have not noticed that characteristic in the wild.

I am indebted to Mr. Robert S. Woods for the Latin diagnosis of the description.

Collections made in Lower California were under permit granted by the Departamento Forestal y de Caza y Pesca on June 20, 1938, by Alfredo Navarro Cortina. This permit was amended on August 15, 1939, by Jose Alaniz Breton, to include collections for the Desert Botanical Garden of Arizona.



NORTHERN DISTRICT, LOWER CALIFORNIA
SHOWING PROBABLE
DISTRIBUTION OF OPUNTIA ROSARICA

A. ROSARIO. B. LOCATION OF DISCOVERY
C. SAN JUAN DE DIOS D. SAN TELMO E. SAN JOSE RANCH
F. OAK PASTURE G. SANTO DOMINGO-HAMILTON RANCH



FIG. 33. A six-foot *Epiphyllum* tied to bamboo stakes. RIGHT: R. W. Kelly demonstrates the method of tying small plants. (Note the moisture conserving cans with drainage holes in the sides)

THE ESPALIER METHOD OF GROWING EPIPHYLLUMS

By JACOLYN MANNING, M.D.

With two companions, sobered by many bleak Dakota winters, and but newly in the Southland, we entered the sunny doorway of the 600 foot "Jeweled Corridor" to blink, dazzled by a vista of resplendent color extending, apparently, to infinity.

It was the annual six-weeks exhibit of the orchidaceous *Epiphyllanae* open to the public in the Coolidge Gardens of Pasadena. It was a May morning, a day with all the perfection usually attributed to June. It was also the period of greatest profusion of florescence of these scintillating rainbows, who extend their magnificent blooming from early Easter until the Fourth of July.

Entering a few paces we involuntarily halted to orient ourselves in this riotous allée of jungle flowers. The floor was clean white sand. Along the side lines, regularly spaced at about four-foot intervals, were twelve-inch plant pots of

dark leaf mould. Each pot contained one green strap-leaved *Epiphyllum* plant, whose flat six-foot stems were lassooed to bamboo frames to form a continuous six to eight foot espalier. This tapestried wall was hung with great lustrous moons of enchanting colors. To complete the splendor of this most modern "peacock promenade," there were, dependent from the framework of the roof, consistently spaced Hanging Baskets all abloom with cascading *Epiphyllums* of the intermediate sizes, in pink, white, rose-color or carmen, scarlet, lavender, and orange.

The tempered sunshine of the white cloth tent enhanced the glowing colors—the glow itself due to the nacreous sheen or luster of the delicate but firm-textured petals. Peerless flaming color, fragrance, golden light, all gave a vibrancy to the air—an illusion of a new presence, a promise, and an invitation. We barely spoke as we paced down the corridor, brushing now and then other

awed beholders. There was, in my companions' faces, a kind of rapture, of transport, of walking in a celestial dream.

So ravishing was the exotic beauty at the right and left of the walls of this allée, we did not at once begin to differentiate the champions until the Dakota woman murmured a half-smothered "Sun Goddess!"—and stood entranced. Rising vertically from its earth-bound roots for six or more feet, the broad strap leaves of the Goddess were hung with glittering copper-bronze flowers the size of tea-plates. The triple row of petals was tinted variously with rose-gold to burnt-orange, centering about a violet eye. Several flowers or buds hung from each frond-like stem. Our homesteaders were not elbowed away from their enthralling find, for other specimens of the Sun Goddess in full flower stood at intervals along the tent walls.

Meanwhile our attention was caught by a cameraman taking photographs in natural color. His study was the brilliant Vive Rouge, a slender but well grown specimen, garlanded with rosy, four-inch bells its entire height. The crepy petals, deepened to heliotrope in the center, were made gay with a stabbing red pistil, crimson stamens, and violet anthers. Vive Rouge is considered a leader in its class for such sterling virtues as vigor of growth, free florescence, lasting quality of individual flowers, and long season of bloom.

Although the air was deliciously fragrant, it was some time before we located the source of the exotic perfume—the hybrid Cooperi. The luxuriant bunched growth of twenty to thirty fronds was wreathed about toward the base with enormous creamy flowers and golden buds. Such serene beauty and intoxicating aroma deserved a more imaginative name than that of its mortal creator. We must thank the old hybridist, however, for using the richly fragrant, white, jungle *Epiphyllum crenatum* from Honduras for one of the parents. The crossing we may suppose was made in the hope of securing a perfect yellow flower, which is considered very desirable, but as yet is not attained. He would have reached his ultimate could he have snared just one more golden chromosome, to stain the petals as rich a buttercup yellow as the very showy buds.

Not all Epiphyllums are scented, only those who can boast a scented ancestor in their quarterings. Hybrids of the vine-like tree-climbing *Selenicereus*, whose breath is so sweet its fragrance will perfume the moonlit night, usually carry on. The gift is made not only to the flower which lasts at most for three or four days, but to the richly spiced fruit. The fragrant Epiphyllum berry, jade-green, as large as a plum, and orna-

mented with decorative spines, will cleave to its stem, gradually tinting to rose as it ripens, and dispensing daily, through the long months, an odor more seductive than any chemist can achieve.

Epiphyllum fruits are also edible. We are telling you, for we have awaited the ripening of many of these lath-house jewels. They are as delicious as the flowers are beautiful. The fruit pulp is firm and studded with small glittering black seed. It is usually pure white, but may be tinted any shade of pink or rose, palest green or ecru. It is invariably sweet, but not cloying. What does it resemble in taste? "Strawberry ice cream," said a child. To me it has but one resemblance, and that, too, a rare enough gratification. It smells and tastes like the little corn-cobs of the Aroid, *Philodendron monstero deliciosa*, which we know under the name of "Prayer Fruit," for, as an old gardener explained, "When you have eaten them, you pray for more."

Let us now follow the photographer who has moved on to a large specimen of the lovely Lotus Lantern. It stands before an open exit, flooded with light, and seems to radiate color. In fact many of these Epiphyllums seems to possess the same pale phosphorescence of the yellow Evening Primrose, who lifts a ghostly head down the garden path in the darkest night. We vainly wish we might see the finished Kodachrome this man has taken, that we might use them to give point to our story, but the cost of reproduction is beyond any Journal.

Looking through our notes here are the names of those whose special beauty, or novelty of color, halted our steps: Brahma, glowing orange; Scheherazade, very large blooms, orchid; Amber Queen, very large, shaded red; Jenkinsonia, petals few and broad, red-brown, gray-lavender center, stems triangular; Venus, pale pink, white center; Young Nun, sparkling white, with cream and brown margined petals, large flowered; Triumph de Grabarville, dark and light pink; Dragon's Eyes, orange scarlet overcast with violet; Latona, violet and vermillion suffused with bronze.

In the hanging baskets, which were mossy looking green affairs, there was just one plant to each, sometimes just one pendant stem, but hung with charming bloom of the small and intermediate types. Many baskets contained the exquisite beauty long known as Deutsche Kaiserin, which we now call First Lady, as it is the prettiest cactus in several of the American Republics and is a true American who did not wantonly migrate to Europe, but was taken there and came back just so fast as she could.

Epiphyllum peacockii, a dazzling regal beauty,

and always a favorite, was much in evidence along the walls of the Jeweled Corridor; it must have called to the mind of matrons whose girlhood coincided with the fin de siècle period, the noted Peacock Alley of the old Waldorf. They could never forget the first time they were paraded through the long vista of golden light, silken tapestried walls, velvet rugs, perfume, distant music, and cadenced voices, by fond lover, or strutting husband. Such opulence of color stormed at the senses and the lady forgot her own beauty. Where will we find un-selfconscious beauty today. Beauty today has a herald and a fanfare. It prances down the center of the public street.

To find a promenade of beauty today, natural unspoiled beauty, we must turn to the world of flowers, such a world as we find in this long tent where there is so much to study, to enjoy, and to make a paradise.

Any pergola, arbor, patio or terraced walk in California, can be utilized as the background and setting for your own Jeweled Corridor this very spring. Mass your own Epiphyllums and add one or two new ones. You can find them already budded in many nurseries. Or root a few cuttings and plan for the future. The essential is a protected lathhouse or sunroom to keep your plants protected and growing through the winter season; even California weather is too tricky and one single frosty night might slay one's whole collection.

Number 4 of a Series. Copyright to author.

TO THE HEART OF AMERICA CACTUS CLUB

The following appeal was sent to his fellow members as he entered the United States Service. It is for such conscientious workers as Robert Rose that we must carry on. Each club or affiliate may well profit by endeavoring to follow his suggestions. Are you going to let these boys down? S. E. H.

It is with deep regret that I realize I can't be with you this year.

Some things of deep importance have come to my attention that I want to bring to you. I have in my hand a letter addressed to my sister from Scott Haselton, Editor of the Cactus and Succulent Journal.

In this letter he informs us that a proposed amateur Cactus Journal will be published during the coming year. It will be sold for \$1 a year. Every member of the Society has the privilege of sending in notes and comments on articles in such a Journal. It might be well for you as a club to send in your notes and comments to your bulletin committee or Mary Lee and have them assorted and sent in to the National Society, if this proposed Journal goes through.

I think it would be well for us to consider it a part of this year's dues to include a subscription to this magazine—remember this is not the regular Cactus and Succulent Journal but is an amateur Cactus and Succulent Journal. An issue should be in every home so you could refer to it constantly.

In case this one dollar should prove a financial difficulty to any one, please inform Mary Lee Rose of this

matter and she will arrange it so you can have a subscription and you can pay her when you are able.

Please send in your dollars to Mary Lee at once or at least sign and return the inclosed application blank so that she may know how many subscriptions to send in. In case this Journal is not continued, your money will be returned. Let's do all in our power to make this a great success.

I don't want this matter to be taken lightly, as it seems to me that this is the best thing that ever happened to help our club grow in this troubled time. This magazine will be written in a language that can well be clearly understood by the amateur. No doubt notes written by the amateur, such as you and I, will be found in the magazine. These articles will be valuable, as they are written by common people like us.

Some time ago we discussed the fact of having a growing contest among our members and as soon as rules can be formulated for this contest it should get under way. We will be glad to furnish plants for the contest. Plants, as I understand it, are to be more or less uniform in size, etc. Let's get busy and keep our club awake.

At our last meeting it became necessary to elect both a new president and vice president. I am sure that all of you will find in Mr. Ray Espenlaub, your new president, the ideal leader of your group. Mr. Espenlaub attended the first National Convention at St. Louis and has a good idea of what the National Society is doing. The guidance of an organization is a tremendous job. Each and every one of you will have to help in every way possible to make your organization a success. Give Mr. Espenlaub every cooperation possible.

In Mr. Nazer as your vice president I am sure you will find a most intelligent man. Mr. Nazer studies almost at every possible moment the cactus and succulent question. He takes advantage of all the books in the library and is quite a student of this work. He should be a very good man to aid in the guidance of your group. Give him your support.

ROBERT ROSE, *Past President...*

FROM NEW JERSEY

I have finally succeeded in solving, partially, the problem of winter quarters for my plants. Since our living room possesses a block of four windows facing south, flanked with a window to east and west, I have had a long cabinet built under these windows, 12 feet by about 15 inches. On these are 4 boxes, 3 feet long, 5 inches deep, and 1 foot wide. Inside the boxes are fitted metal trays coming exactly to the level of the wooden boxes, and the level of the window sills. These are filled with peat moss, and the pots sunk into the moss.

Apart from being extremely decorative (perhaps only to my frankly prejudiced eye!) I am hoping that the moss will keep the plants in just the right state of moistness, and prevent me from committing the usual crime of watering too frequently. It is such a temptation to lift the long-spouted red watering can, and water the precious little plants too often.

Last summer all the pots were sunk in the garden, with pretty good results.

Mammillaria bocasana bloomed profusely. *Tbelocactus bicolor* had 3 fine flowers in July. *Coryphantha*—I'm not sure of the name of this one, had several flowers during August—yellow with rose outside. It had buds when brought in, and bloomed inside in October. *Lophophora Williamsii* flowered all summer, and even set seed. All plants made good growth.

Such pleasure as I get out of my hobby!

FRANCES WEBER, N. J.

Habitat Photos in Mexico

By J. STUART BOYLES



FIG. 34

Heliocereus speciosus, supposedly one of the parents of all *Epiphyllum* hybrids, growing naturally in the Federal District about 30 or 35 miles southwest of Mexico City, near a small settlement called St. Celia, which is not far from some old pyramids. The plant itself has triangular stems and is very densely spined along the edges. It bears a large crimson flower and is a day bloomer. Note the orchid and *Rhipsalis* also growing in the same tree.

FIG. 35

Heliocereus sp. Day bloomer with white blossoms. The picture was taken in the tropics along the east side of Mexico near Cordoba. This cactus is found growing with purple orchids.



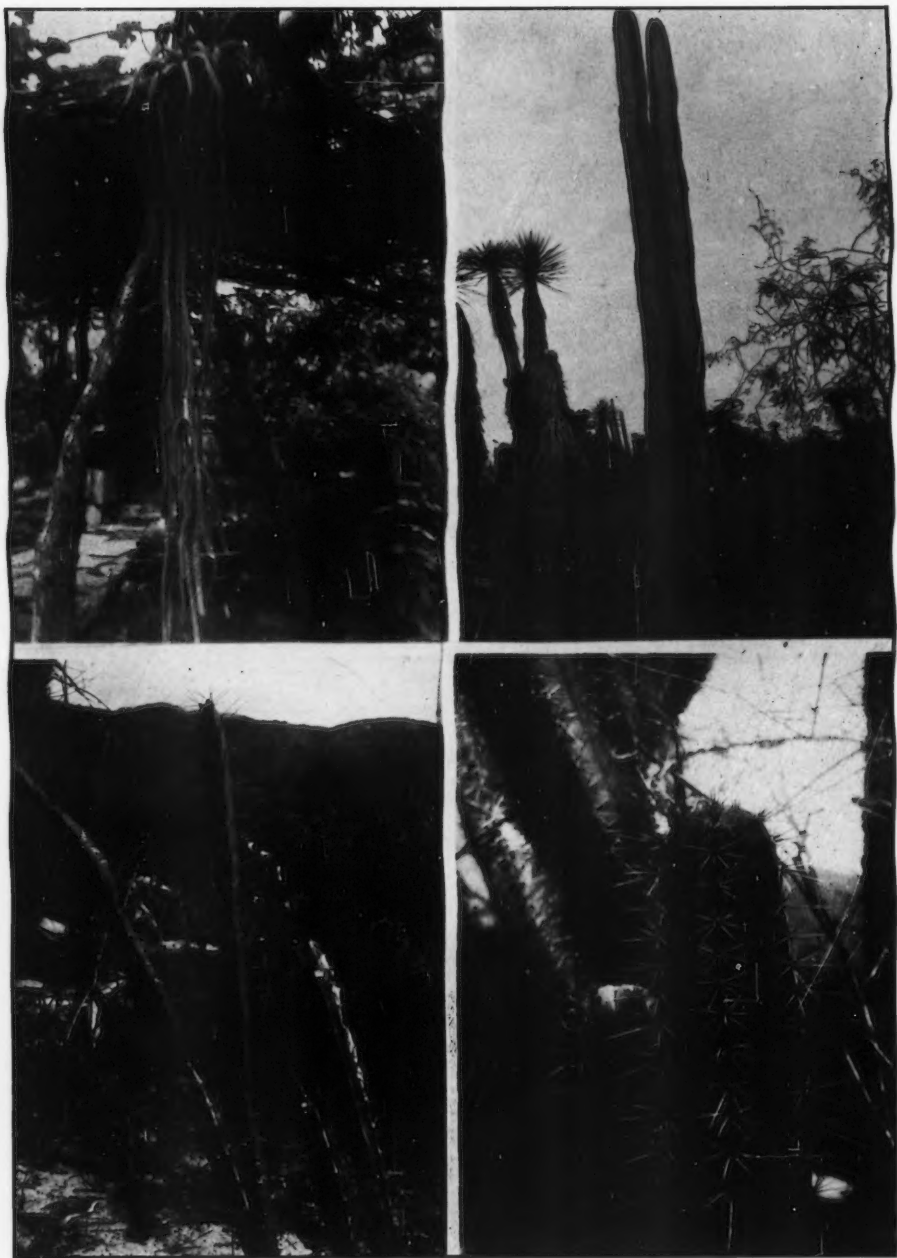


FIG. 36. Habitat pictures. See captions on the opposite page

FIG. 37

Nyctocereus serpentinus photographed about 35 miles northwest of Mexico City in a valley at the base of a large mountain range.



OPPOSITE PAGE SHOWS: (Top left) *Aporocactus flagelliformis* found near Orizaba. This is a truly wonderful blooming cactus with the true doubled blossoms in a very delicate shade of pink. Note that the "Rat Tail Cactus" is also an epiphyte with its home in trees and obtaining its sustenance from leaf mold.

(Top right) *Lemaireocereus marginatus* found in the black flats near Tehuacan where the growth is very thick. Growing in the same locality in very alkaline soil were *Pachycereus chrysomallus*, *Ferocactus latispinus*, *Lemaireocereus chende*, *Nopalea auberi*, *Coryphantha erecta*, *Mammillaria compressa* and several species of *Opuntia*.

(Bottom left) *Acanthocereus occidentalis* was possibly one of the most peculiarly growing cacti of them all. The picture was taken about 25 miles south of Acapulco. This species grows in the white sand along the beach within 10 to 15 feet of the water's edge of the Pacific.

(Bottom right) *Lemaireocereus pruinosus* was found growing in association with *Acanthocereus pentagonus* in black flats near Montemorelos between Monterrey and Victoria. The soil evidence shows to have been largely swampy.

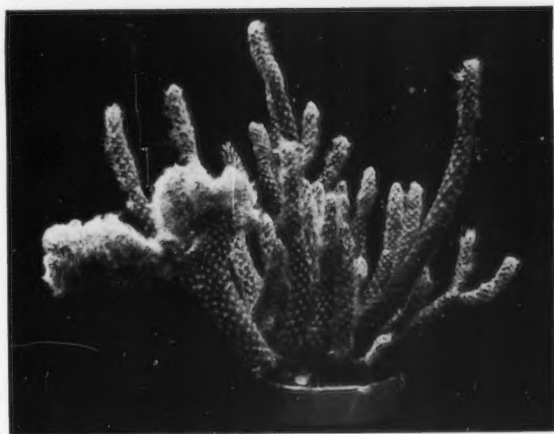


FIG. 38. *Opuntia vestita* grown from a 6-inch cutting by James E. Kipp of Chilliwack, B.C. The plant is 22 inches across and 20 inches high. It has 50 branches and the crested part measures 11 in. across and has 36 in. of "wave."

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